

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed March 21, 2007. At the time of the Office Action, Claims 1-5, 10-14, and 58-107 were pending in this Application. Claims 1-5, 10-14, and 58-65 were rejected. Claims 66-107 were previously withdrawn. Applicant respectfully requests reconsideration and favorable action in this case.

Rejections under 35 U.S.C. §103

Claims 1-4, 10-13, and 58-61 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,866,045 issued to Frederic Maillard *et al.* ("Maillard") in view of non-patent article entitled "Proton Magnetic Resonance Studies of Ultraviolet-Irradiated Apurinic Acid," Nucleic Acids Res. 1974; 1(8) 999-1005 by Ronald O. Rahn *et al.* ("Rahn") and non-patent document entitled "Mechanical Properties of DNA," wikipedia.org, 3/14/2007 ("Mechanical Properties of DNA"). Claims 5 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Maillard, Rahn, and Mechanical Properties of DNA, as applied to Claims 1 and 10, in further view of admitted prior art. Claims 62-65 were rejected under 35 U.S.C. §103(a) as being unpatentable over Maillard, Rahn, and Mechanical Properties of DNA, as applied to Claims 1 and 10, in further view of U.S. Patent 6,027,890 issued to Jeffrey Van Ness *et al.* ("Ness"). Applicant respectfully traverses and submits the cited art combination, even if proper, which Applicant does not concede, does not render the claimed embodiment of the invention obvious.

In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Furthermore, according to § 2143 of the Manual of Patent Examining Procedure, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Here, all pending claims are directed to filters comprising "apurinic acid." Maillard, relied upon by the Examiner, admittedly does not disclose the utilization of "apurinic acid" as part of a filtering system. Maillard discloses the utilization of DNA and RNA. The Examiner cites Rahn for disclosing apurinic acid as follows: "Apurinic acid is a single-stranded polydeoxyribonucleotide (DNA) easily obtained upon depurination of DNA." (Office Action, page 3)(emphasis added) Rahn does not disclose anything concerning filter systems. The Examiner then concludes it "would have been obvious . . . to use apurinic acid as an alternative to DNA" in a filtering system. (*Id.*)

First, "apurinic acid" is not "DNA." Second, Maillard does not teach that "apurinic acid" is DNA. In fact, Rahn confirms "apurinic acid" is a single-stranded polydeoxyribonucleotide" not a deoxyribonucleic acid or DNA. Third, Maillard teaches away from utilizing a single stranded polydeoxynucleotide, such as "apurinic acid", as follows:

[T]he method according to the invention comprises the following steps:

the step of scavenging all or part of the toxic products by means of an active ingredient acting on said toxic products according to the molecular processes **comparable** to those according to which human cell DNA and/or RNA reacts towards said toxic products. . .

(Col. 2, lines 2 - 8)(emphasis added)

Maillard continues and teaches that "[p]referably, the molecule of the active ingredient is DNA and/or RNA and/or a DNA or RNA derivative, as for example adenosine triphosphate (ATP), cyclic adenosine monophosphate (AMP), adenycyclase." (Col. 2, lines 41 - 44) All examples of Maillard disclose the use of "**salmon DNA**." (Col. 6, lines 57 - 61; Col. 7, lines 39 - 67) (emphasis added).

Rahn teaches that "apurinic acid" may be prepared as follows:

Apurinic acid was prepared from **salmon sperm DNA** (Calbiochem, A grade) by dissolving 200 mg of DNA in 100 ml of 66 % formic acid and maintaining the solution at 37 C for 18 hr. This procedure results in a depurinated DNA of about 57,000 daltons(3). Removal of the free purines and formic acid was accomplished by exhaustive dialysis against distilled water, and the apurinic acid was recovered by lyophilization.

(Rahn, page 1000)(emphasis added).

Thus, according to the Examiner's logic, since (1) Maillard teaches "salmon DNA" is perfectly fine to use in a filter for carcinogens, and (2) Rahn teaches that salmon DNA can be depurinated to yield apurinic acid, that it would have been obvious to one of ordinary skill in the art to utilize apurinic acid recovered from salmon DNA, instead of just salmon DNA, to form the filtering system as now claimed. As illustrated, based upon the teachings of Maillard, one of ordinary skill in the art would simply utilize salmon DNA and not go to the extra steps of forming apurinic acid from salmon DNA according to Rahn. Indeed, neither Maillard nor Rahn teach that DNA should be depurinated, apurinic acid should be recovered from the depurinated DNA, or that apurinic acid should be used as a component of a filtering system. Withdrawal of the rejection is requested.

CONCLUSION

Applicant has now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicant respectfully requests reconsideration of Claims 1-5, 10-14, and 58-65.

Applicant encloses a Petition for Three Month Extension of Time and authorizes the Commissioner to charge the \$510.00 fee to Deposit Account No. 50-2148 of Baker Botts L.L.P. Applicant believes there are no further fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up by a telephone conversation, please contact Applicant's attorney at 512.322.2606.

Respectfully submitted,
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